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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/471,637	12/23/1999	YUVAL BACHRACH	42390.P7286	7753

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EXAMINER

LAFORGIA, CHRISTIAN A

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/471,637

Applicant(s)

BACHRACH, YUVAL

Examiner

Christian La Forgia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. The request for reconsideration filed on 24 February 2003 is noted and made of record.
2. Claims 1 through 21 are presented for examination.

Drawings

3. The corrected or substitute drawings were received on 11 March 2003. These drawings are accepted.

4. The Patent and Trademark Office no longer makes drawing changes. See 1017 O.G. 4.

It is applicant's responsibility to ensure that the drawings are corrected. Corrections must be made in accordance with the instructions below.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. **Correction of Informalities -- 37 CFR 1.85**

New corrected drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the "Notice of Allowability."

Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. **Corrections other than Informalities Noted by Draftsperson on form PTO-948.**

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

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Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.185(a). Failure to take corrective action within the set (or extended) period will result in **ABANDONMENT** of the application.

Response to Amendment

5. The Examiner withdraws the objection to the Oath and Declaration now that it has been submitted and reviewed.

Response to Arguments

6. According to <http://www.pcwebopaedia.com> the definition of a word is as follows:

7. In programming, the natural data size of a computer. The size of a word varies from one computer to another, depending on the CPU. For computers with a 16-bit CPU, a word is 16 bits (2 bytes). On large mainframes, a word can be as long as 64 bits (8 bytes). So a word is a standard set forth by a computer and is inherent in all computer systems as the method to move data from one location to another.

8. Applicant's arguments with respect to claims 1 through 21 have been considered but are moot in view of the new ground(s) of rejection.

9. See further 35 USC § 102 and 35 USC § 103 rejections that follow.

Claim Rejections - 35 USC § 102

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 1, 2, 8, 9, 15, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent No. 6,427,173 to Boucher et al., (hereinafter Boucher).

12. As per claim 1, Boucher teaches a MAC comprising:

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13. at least one PHY-to-MAC port to receive signals indicative of PHY-to-MAC words (Figure 12, 13 [parts 210, 240, 242, 244], 21 [parts 2100, 2109, 402]; column 24, line 60 to column 25, line 16); and,

14. at least one MAC-to-PHY port to transmit signals indicative of MAC-to-PHY words (Figure 12, 13 [parts 210, 240, 242, 244], 21 [parts 2100, 2109, 402]; column 24, line 60 to column 25, line 16);

15. wherein the PHY-to-MAC words include slow mode PHY-to-MAC words, wherein the slow mode PHY-to-MAC words include a transmit cycle field to indicate whether the MAC is to provide data in a next MAC-to-PHY word (Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34; column 11, lines 22-46).

16. As per claim 2, Boucher teaches the PHY-to-MAC layer words include equal speed mode PHY-to-MAC words (Abstract; Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34).

17. As per claim 8, Boucher teaches a PHY to transmit and receive signals propagated on a medium, and to communicate with a MAC via PHY-to-MAC words and MAC-to-PHY words, the PHY comprising:

18. at least one MAC-to-PHY port to receive signals indicative of MAC-to-PHY (Figure 12, 13 [parts 210, 240, 242, 244], 21 [parts 2100, 2109, 402]; column 24, line 60 to column 25, line 16); and,

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19. at least one PHY-to-MAC port to transmit signals indicative of PHY-to-MAC words (Figure 12, 13 [parts 210, 240, 242, 244], 21 [parts 2100, 2109, 402]; column 24, line 60 to column 25, line 16);

20. wherein the PHY-to-MAC words include slow mode PHY-to-MAC words, wherein the slow mode PHY-to-MAC words include a transmit cycle field to indicate whether the MAC is requested by the PHY to provide data for transmission on the medium in a next MAC-to-PHY word (Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34; column 11, lines 22-46).

21. As per claim 9, Boucher teaches the PHY-to-MAC layer words include equal speed mode PHY-to-MAC words (Abstract; Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34).

22. As per claim 15, Boucher teaches a computer system comprising:

23. a MAC (Figure 12, 13 [parts 210, 240, 242, 244], 21 [parts 2100, 2109, 402]; column 24, line 60 to column 25, line 16); and,

24. a PHY to receive and transmit signals propagated on a medium and connected to the MAC so that the MAC provides MAC-to-PHY words to the PHY and the PHY provides PHY-to-MAC words to the MAC (Figure 12, 13 [parts 210, 240, 242, 244], 21 [parts 2100, 2109, 402]; column 24, line 60 to column 25, line 16);

25. wherein the PHY-to-MAC words and the MAC-to-PHY words are synchronously paired so that the MAC provides one MAC-to-PHY word to the PHY while the PHY provides one

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PHY-to-MAC word to the MAC (Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34; column 11, lines 22-46);

26. wherein the PHY-to-MAC words include slow mode PHY-to-MAC words having a transmit cycle field (Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34; column 11, lines 22-46; column 13, lines 37-55; column 17, lines 35-67);

27. wherein if the transmit cycle field of a first slow mode PHY-to-MAC word is set to a first value, the first slow mode PHY-to-MAC word being synchronously paired with a first MAC-to-PHY word, then the MAC is requested by the PHY to provide transmit data in a second MAC-to-PHY word for transmission over the medium, where the second MAC-to-PHY word succeeds the first MAC-to-PHY word, and if the transmit cycle field of the first slow mode PHY-to-MAC word is set to a second value different from the first value, then no request is made by the PHY to the MAC to provide transmit data (Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34; column 11, lines 22-46).

28. As per claim 16, Boucher teaches the PHY-to-MAC layer words include equal speed mode PHY-to-MAC words (Abstract; Figures 4B, 4D, 6, 9, 22 [parts 2201, 2202, 2200]; column 8, lines 28-63; column 9, lines 13-66; column 10, lines 18-34).

Claim Rejections - 35 USC § 103

29. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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30. Claims 3, 4, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boucher in view of Rubin.

31. As per claim 3, Boucher does not teach wherein the PHY-to-MAC words and MAC-to-PHY words are each 12 bits wide.

32. Rubin teaches wherein the PHY-to-MAC words and MAC-to-PHY words are each 12 bits wide (Figures 1, 2, & 19; column 11, line 40 to column 14, line 10; column 44, line 49 to column 45, line 65). It would have been obvious to one with ordinary skill in the art at the time the invention was made to include the 12 bit words of Rubin with the system of Boucher, because it is the average of the two standards (8 bit words & 16 bit words) used in data communication, which in turn, allows for more data bits to be transferred than the 8 bit word, and no bits to be left unused with the 16 bit word. See *In re Rose*, 220 F.2d 459, 463, 105 USPQ 237, 240 (CCPA 195).

33. Regarding claim 4, Boucher teaches a transmit cycle field in bit position 9 (column 13, lines 37-55; column 17, lines 35-67). It would be obvious to one with ordinary skill in the art at the time the invention was made to place the transmit cycle field bit in any bit position as long as it was consistent throughout the system. See *In re Japikse*, 181 F.2d 1019, 1023, 86 USPQ 70, 73 (CCPA 1950).

34. As per claim 6, Boucher does not teach wherein the PHY-to-MAC words include equal speed mode PHY-to-MAC words; and PHY-to-MAC words are each 12 bits wide.

35. Rubin teaches wherein the PHY-to-MAC words include equal speed mode PHY-to-MAC words; and PHY-to-MAC words are each 12 bits wide (Figures 1, 2, & 19; column 11, line 40 to

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column 14, line 10; column 44, line 49 to column 45, line 65). It would have been obvious to one with ordinary skill in the art at the time the invention was made to include the 12 bit words of Rubin with the system of Boucher, because it is the average of the two standards (8 bit words & 16 bit words) used in data communication, which in turn, allows for more data bits to be transferred than the 8 bit word, and no bits to be left unused with the 16 bit word. See *In re Rose*, 220 F.2d 459, 463, 105 USPQ 237, 240 (CCPA 195).

36. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boucher in view of Findlater.

37. With regards to claim 5, Boucher does not teach the slow mode PHY-to-MAC words have receive data fields in bit positions zero, one, two, four, five, six, seven, and eight, a carrier sense signal field in bit position three, a receive cycle field in bit position ten, and a receive data valid field in bit position eleven.

38. Findlater teaches the slow mode PHY-to-MAC words have receive data fields in bit positions zero, one, two, four, five, six, seven, and eight, a carrier sense signal field in bit position three, a receive cycle field in bit position ten, and a receive data valid field in bit position eleven (Figure 2; column 2, line 18 to column 4, line 14). It would be obvious to one with ordinary skill in the art at the time the invention was made to place the aforementioned bits in any bit position as long as it was consistent throughout the system. See *In re Japikse*, 181 F.2d 1019, 1023, 86 USPQ 70, 73 (CCPA 1950).

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39. With regards to claim 7, Boucher does not teach the slow mode PHY-to-MAC words have receive data fields in bit positions zero, one, two, four, five, six, seven, and eight, a carrier sense signal field in bit position three, a receive cycle field in bit position ten, and a receive data valid field in bit position eleven;

40. the equal speed mode PHY-to-MAC words have receive data fields in bit positions zero, one, two, four, five, six, seven, and eight, a carrier sense signal field in bit position three, a receive cycle field in bit position ten, a receive data valid field in bit position eleven, and a management frames protocol data out field in bit position nine.

41. Findlater teaches the slow mode PHY-to-MAC words have receive data fields in bit positions zero, one, two, four, five, six, seven, and eight, a carrier sense signal field in bit position three, a receive cycle field in bit position ten, and a receive data valid field in bit position eleven (Figure 2; column 2, line 18 to column 4, line 14);

42. the equal speed mode PHY-to-MAC words have receive data fields in bit positions zero, one, two, four, five, six, seven, and eight, a carrier sense signal field in bit position three, a receive cycle field in bit position ten, a receive data valid field in bit position eleven, and a management frames protocol data out field in bit position nine (Figures 2 & 7; column 2, line 18 to column 4, line 14; column 11, lines 7-47). It would be obvious to one with ordinary skill in the art at the time the invention was made to place the aforementioned bits in any bit position as long as it was consistent throughout the system. See *In re Japikse*, 181 F.2d 1019, 1023, 86 USPQ 70, 73 (CCPA 1950).

43. Claims 10 through 14 are rejected for similar reasons stated above.

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44. Claims 17 through 21 are rejected for similar reasons stated above.

Conclusion

45. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (703) 305-7704.

The examiner can normally be reached on Monday thru Thursday 7-5.

46. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (703) 305-9648. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7240 for regular communications and (703) 746-7239 for After Final communications.

47. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Christian LaForgia
Patent Examiner
Art Unit 2155

clf
March 27, 2003


AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
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